ORIGINAL COMMUNICATIONS.

CASES IN OPHTHALMIC PRACTICE.

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CASE I. ENLARGEMENT OF THE EYEBALL FROM INJURY: EFFECTS PRODUCED BY A SUBSEQUENT BLOW: EXCISION OF THE FRONT OF THE EYE. James Cooper, aged twelve, was admitted into the male eye ward of St. Mary's Hospital, October 1st, 1852. He was said to have enjoyed good health until five years and a half previously, when his left eye was accidentally scratched with a fragment of glass. This was followed by total loss of vision, but without much pain until the expiration of three months, when the eye became painful, and began to enlarge. It was then treated with leeches, blisters, etc., for about six weeks; the pain subsided, but the globe continued enlarged. He had since complained of pain in it from time to time. Seven days before his admission the eye was struck by a potatoe thrown by another boy, which caused it to burst and to bleed very profusely. Ever since he had suffered excruciating pain, and the eye had remained in a state of inflammation.

The lad was greatly emaciated, of a pale strumous aspect; light-haired, and with bloodless lips. He lay constantly on the bed, with his face buried in the pillows. The left eyelid was of a dusky purplish hue, and traversed by many tortuous veins. The eyeball was considerably enlarged, and the sclerotic was of a deep brick-dust red colour. All traces of the cornea had disappeared; and its place was occupied by a yellowish brown mass, having a deep ulcerated spot nearly half an inch in length, and two lines in width, extending down its inner side; from this there flowed a sanious offensive discharge. The patient complained of paroxysms of severe lancinating pain.

He was ordered to take two grains of hydrargyrum cum cretâ, with four grains of the potassio-tartrate of iron, thrice daily: the eye was directed to be kept moistened with a lotion of half an ounce of liquor sodæ chlorinatæ in ten ounces of water.

This treatment was continued for twelve days, with some advantage, as the pain diminished in intensity, and the general swelling was rather lessened. A white sloughy mass now occupied the place of the cornea, and the discharge was considerable. The case was, at this juncture, seen by several of my colleagues, and by Mr. Hodgson. A difference of opinion existed as to the precise nature of the morbid change, but all agreed that it was proper to endeavour to afford relief by operation, as the lad's general health was failing rapidly, and the prospects of improvement from palliative or medicinal measures were very slight.

It was determined, therefore, to slice off the mass occupying the front of the eye. If the contents of the globe were fluid, they would be thereby evacuated, and the eye would collapse. If, on the contrary, the disease appeared to be of a malignant character, the organ should be forthwith extirpated.

On the 13th October, the lad was placed under the influence of chloroform; and, with a long cataract knife, the mass occupying the front of the eye, including the ulcerated fissure, was fairly sliced off. Contrary to expectation, there was very little bleeding; but the eyeball was found to be filled with a tough mass, there being no trace of either lens or vitreous humour. Portions of the mass were immediately submitted to the microscope, and presented a fibrinous appearance, with great numbers of crystals of hæmatine dispersed through it. No definite cellular structure could be made out; and certainly no traces of malignant disease. It seemed, in fact, as if the globe was filled with the remains of a large blood clot. This rendered further proceedings unnecessary. The eyelids were closed with strips of plaster; and cold wet bandages ordered to be applied.

From the time of the operation, the relief was most marked; all pain ceased, the lad slept well, and rapidly recovered his appetite and spirits. On the third day after the operation, the eyelids had assumed a natural appearance, and healthy granulations were seen springing from the surface of the wound. Iron and cod liver oil were prescribed; and, on the tenth day after the removal of the mass, the wound was found to have healed kindly, and the remains of the globe to be perfectly free from irritation, forming an excellent stump for an artificial eye.

CASE II. NEURALGIA OF THE EYE FROM MECHANICAL IRRITATION: OPERATION: RECOVERY. W. W., aged 22, was admitted into the male ophthalmic ward of St. Mary's Hospital, on June 14th, 1853. When eleven years of age, he had received a violent blow on the right eye, which discoloured it, but was not at the time followed by inflammation. The eye speedily resumed its natural appearance, under the application of the popular remedy of raw beef. Three months afterwards, however, inflammation attacked the organ, and was speedily attended with ulceration, which penetrated through the cornea, causing adhesion of the entire circle of the pupil, and subsequently giving rise to a dense leucomatous projecting cicatrix, occupying two-thirds of the cornea. After this, the eye suffered from repeated attacks of pustular ophthalmia; and, in 1850, violent neuralgic pain set in, which, with the exception of one fortnight's reprieve, continued constantly, though varying in degree, until the period of his application. He had sought relief at many institutions in town and country, and had undergone a great variety of treatment, including the frequent application of caustics, without deriving the least advantage.

He was pale, emaciated, and evidently worn down with suffering. Every attempt to face the light, or to open the eye, brought on a gush of tears, and a paroxysm of violent pain. The cornea presented a solid leucomatous mass projecting from it, having almost a staphylomatous character; and on its most prominent point a small white scale was seen.

Being of opinion that this scale, together with the mass generally, was the cause of the pain, I determined to slice it off. On the following day, the patient having been chloroformed, the scale was first lifted off, and the mass then carefully pared off down to the level of the cornea. It was solid, and blood oozed from the cut surface. The lids were closed with strips of plaster, and wet rags were ordered to be applied. Twenty drops of liquor opii sedativus were given at bedtime. The patient passed an excellent night, and had no pain whatever.

The eye rapidly recovered from the operation, and the patient was discharged from the house on June 21st, and ordered to attend as an out-patient. The only further treatment required, was tonic medicine to improve the general health. It is satisfactory to find that he is now able to follow his occupation as a workman, and that the eye continues sound, with the exception of the opacity of the cornea. There has been absolutely no pain since the operation.

Under the microscope, the portion removed presented the characters of ordinary cicatrix tissue. The solid scale was

calcareous deposit, and had been attached to the apex of the growth.

CASE III. PUNCTURED WOUND OF THE EYE: HERNIA OF THE AQUEOUS MEMBRANE. For the history of the following case, up to the 1st of May, I am indebted to Mr. Lawrence, one of the resident medical officers of St. Mary's Hospital, who had charge of the case up to that time.

William Peach, aged 33, a metal fitter at the Great Western Railway, became an out-patient at St. Mary's Hospital April 21st, 1853. He had been struck on the right eye, a short time before application, by a nearly red-hot chip of iron, propelled with great force from a piece of metal which he was boring. On examination, there appeared a wound of the cornea towards the lower part of its inner half; but no foreign substance could be detected in it. The conjunctiva of the eye was slightly inflamed; there was considerable lachrymation, and some intolerance of light.

The eye was ordered to be covered, and the patient to take two grains of calomel with the fourth of a grain of opium, thrice daily; collyrium aluminis was ordered to be used occasionally.

April 22nd. The eye was more inflamed, and more painful. There was increased photophobia. Pulse 100, and full; tongue furred. Four leeches were applied to the temple. The pills and collyrium were continued.

April 23rd. The leeches bled freely, and the eye was much better. The conjunctiva was raised over the injured portion into a vesicle, so that the sight was disturbed.

April 27th. The eye was not so well, being more inflamed and painful. The mouth was slightly sore. Three leeches were ordered to be applied, and the treatment to be continued.

April 29th. The eye was less painful, and less inflamed; but the vesicle seemed to be increasing. He was ordered to see Mr. White Cooper.

April 30th. This patient came this day under my care; and the appearances were as represented in the sketch;

there was slight general congestion of the conjunctiva, most marked in the neighbourhood of the wound. The iris was not inflamed. A pear-shaped transparent vesicle projected from the cornea, quite over the margin of the lower lid. The pupil was contracted and distorted, the edge being apparently adherent to the wound. I could not satisfactorily make out whether the vesicle was the posterior elastic lamina projecting in a hernia-like pouch through the wound, or whether it was more anterior. There could be no doubt, however, that it was in connexion with the anterior chamber. From its large size, and its situation, interfering with the closure of the lids, I determined to puncture it, and, by the application of the nitrate of silver, to stimulate the union of the edges of the wound. On pricking the vesicle with a cataract needle, the fluid shot out, and it instantly subsided. The point whence the fluid escaped was lightly touched with nitrate of silver.

May 3rd. The vesicle had nearly regained its former size. It was again punctured and touched with the caustic.

May 6th. It was only about one-half its former size; but it was deemed advisable to puncture it once more, and to apply the nitrate of silver rather more freely than on the former occasions. The application was followed by a considerable amount of pain, which continued more or less for two days; there was, however, no active inflammation. From that time the wound healed, the surface of the cornea

merely presenting a linear cicatrix, indicating the situation of the injury. The pupil, being adherent at one point, remains oblong; but the sight of the eye is now nearly perfect.

REMARKS. The first case affords an illustration of a rather unusual result of injury to the eye. The appearances before the operation, namely, the livid palpebræ traversed by great tortuous veins, the hard, enlarged, and thoroughly disorganised globe, discharging an acrid sanious fluid from a foul and ragged fissure, and the intolerable pain, led to suspicion of malignant action; a suspicion favoured by the unhealthy, emaciated aspect of the lad. Cases are on record, in which diseases of the eye, of an innocent character, have been pronounced malignant, and treated accordingly. Professor Roser especially states that the mistake occurred to him, "to consider as fungus oculi a case of purulent choroiditis, which supervened on staphyloma, that had been cured several years previously, and which I first beheld when it was at the height of its development. I accordingly prescribed extirpation. In a case which occurred at a later period, which, still more illuvely than the first, resembled carcinoma, a medullary fungus breaking forth through the eye, and in which nothing else was found than purulent choroiditis, with staphyloma of old standing, I was prevented from forming an erroneous diagnosis, solely by the circumstance that I had several times, at early periods, seen the child as a patient with staphyloma."

The effusion of blood deep in the eye sometimes gives rise to appearances which may be mistaken for malignant disease. At the present time, I have in attendance at St. Mary's a little child, into whose left eye a fork was thrust just at the junction of the cornea with the sclerotic, wounding the iris. It probably missed the lens, as there is no cataract; but, deep in the eye, there is visible a fawn coloured, metallic looking mass, just like the commencement of medullary disease. I was in doubt, for some time, whether the injury might not have excited some such morbid action; but I believe that is not the case, and that the appearance is merely fibrin, from which the red particles have been removed. I am the more led to this conclusion from two other cases which have fallen under my notice, where, in elderly people, a vessel had given way deep in the eye, producing sudden blindness, and causing first a red, then a brown, and lastly a yellow reflection from behind the lens.

In the case of James Cooper, the solid contents of the globe were probably the remains of blood which had been poured into the cavity; a condition at the first glance unsatisfactory, but really useful, as its firmness afforded an excellent cushion for an artificial eye. The benefit afforded by the operation was most marked; and the rapid subsequent improvement in the nutrition of the patient manifested how vast a relief had been afforded to the constitution.

Though the incision for the removal of the diseased parts passed through highly inflamed structures, it was attended with very little bleeding. Formidable hæmorrhage, however, occasionally takes place in similar operations; an instance of which occurred in my own practice, a few months ago. I removed a portion of a staphylomatous cornea from an enlarged and disorganised eye, for the purpose of sinking the globe. For thirty-six hours, with trifling intermissions, the wound continued to bleed, in spite of a variety of efforts made to stop it. In such cases, the erect posture, the local application of styptic fluids and pounded ice in bags, with such gentle pressure as a moderately tight compress will afford, are the best measures for controlling the flow of blood. As this is seldom from one point, but rather from many weakened and dilated vessels, neither ligatures nor caustics can be conveniently used. The globe often remains distended with blood; but much of this is subsequently absorbed.

When the wound made by the operation has nearly healed, it is not uncommon to find a few exuberant granulations lingering and retarding the cure. They should be touched

with sulphate of copper, and the eye bathed twice daily with a solution of alum or of tannic acid, which latter, in the proportion of four or six grains to the ounce, is very useful. The alum and tannic acid have been prescribed in combination; but a curdy precipitate of tannate of alumina is thrown down, and a large portion of tannin is rendered inert. By the treatment mentioned, the cicatrix soon acquires firmness, and the eye becomes free from mucous discharge.

The nature of the change by which such opacities, or such heaping up of abnormal tissue, as that described in case II, is produced, has been well explained by Mr. Bowman: "The nature of the nutritive process in the lamellated tissue is such, that this tissue recovers itself in a great measure, by timely treatment, from almost any amount of inflammation, and consequent effusion, which falls short of actual destruction of its elements; but when these elements are at all displaced or consumed under the morbid process, then permanent opacity is very likely, and, indeed, almost certain, to follow; for so artificial is the mechanical arrangement of the elementary lamellæ, on which the transparency of the cornea depends, that when their substance is once removed, its place cannot be supplied with a tissue of an equally elaborate organisation. The new material, though its bulk and strength may be equivalent to those of the old, is fibrous instead of being lamellated, and opaque instead of being translucent. It contains a considerable quantity of yellow tissue, intimately mixed with the white, and both most irregularly interwoven and ill-developed—ready to become the nidus of small granules of earthy or fatty matter, such as readily settle in parts of deteriorated structure."

The presence of such earthy or ossific deposit in the eye is far from uncommon; ossous cataract being perhaps the most frequent example. Of this, a very excellent specimen was exhibited at the Pathological Society by Mr. Canton, in May 1851; the capsule of the lens was completely converted into calcareous material, and osseous patches had been formed in several places between the retina and choroid. It was taken from a woman aged 73, who, thirty years before her death, had received a blow on the eye, followed by wasting of that organ.

It does not necessarily follow, that ossific deposits in the eye should be attended with neuralgic pain; but they are so in a large number of cases. In the first volume of the *London Journal of Medicine*, four cases were related by me, which illustrate this point. The case above described affords another example; and one very similar is mentioned by Mr. Bowman. A girl, aged 14, was brought to that gentleman, suffering from severe inflammation of the eye, which had been partially sunk several years before, and in which no perception of light remained. The irritation was very great, especially on every movement of the lid: on examination, a hard, angular piece of bone was observed, imbedded in the front of a dense opacity of the cornea, and projecting beyond it, quite bare. The fragment, which was of the size of a large pin's head, was easily removed with a pair of forceps, and the patient speedily got well.

I am an advocate for the use of the knife, in preference to escharotics, for removing leucomatous growths or tumours from the eye; it is more sure, more speedy, more manageable, and less painful. In a few cases which have fallen under my notice, where inflammation has followed excision, it could generally be traced to long continued and abortive attempts to pare off the growth, accompanied with violent pressure on the eye to steady it. If chloroform be used, the operation can be performed at once with neatness and a light hand, and the relief is immediate.

10, Berkeley Square, July 1853.

CASE OF RUPTURE OF AN ANEURISM OF THE TRANSVERSE PORTION OF THE ARCH OF THE AORTA INTO THE TRUNK OF THE PULMONARY ARTERY.

By W. BIRD HERAPATH, M.D.

On a Sunday evening, at half past nine, P.M., I was summoned to attend Mr. Charles M— R—, aged 53, who was then residing near me. I found him in bed; he was complaining of pain in the epigastrium, and of disposition to nausea, which had been increased to vomiting by the ingestion of warm water. He had an uneasy sensation in the bowels, with slight relaxation also. The substances ejected from the stomach were highly charged with acid. He also suffered from thirst; the tongue was, however, clean; the pulse was quicker than it ought to be, 100, soft and regular. The skin of the extremities, where exposed, was cold and moist, but under the bedclothes, warmer. He had no headache. The respiration was somewhat quicker than usual; he also had a slight cough, with frothy mucous expectoration; he compared the pain in the epigastrium to a constant burning sensation. He had often suffered from it before; and had hitherto always obtained relief from a draught of cold water. This had failed, as well as the emetic treatment on the present occasion.

The history of the case was the following, as given me by the wife. He was a brewer and distiller, and had held a situation in a neighbouring brewery during the last six months. He was rather fond of Scotch whiskey, and generally had several glasses of "toddy" during the day at intervals; but he was never intoxicated. The day previously, he attended to his duties as usual, and came home in the evening in his ordinary state of health. He had supped on beef, which was not fresh or good. The child had also eaten of the same dish, and not liking it, declined taking any more. Mrs. R. could not eat it, as it tasted strange and "fusty". He had tried to go to church on the Sunday, but came home again faint, and had taken no food. Taking all these circumstances into consideration, I thought that he laboured under gastralgia, from acidity; that the faintness and depression were produced by the emetic and exertion, together with abstinence from food and stimuli during the day.

I prescribed a pill containing four grains of calomel and one grain of opium, to be taken directly, and an antacid saline aperient, with some compound spirit of ammonia, every two hours; a mustard cataplasm to the epigastrium, and bottles of warm water to the feet; a little arrowroot and brandy as diet. At this time he only sent for me in consequence of the advice of a friend: the patient himself did not think it necessary to have a medical man.

About a quarter before eleven the same evening, I was again summoned to this patient, who was stated to be much worse. Thinking it to be over anxiety and timidity, I at first advised perseverance with the remedies; but a second messenger, following on the heels of the first, said that he was certainly dying, and begged my instant attention. In crossing the road, I met a third on the way to me. This had prepared me for a great and sudden change; but I certainly was not a little surprised to find my patient moribund. He was pulseless; cold; clammy; the face was pallid; the eyes glazed and insensible; no reflex excitomotor phenomena of eyelids; and the jaw fallen. He made two or three convulsive gasps, and all was over. I attempted to restore animation by placing the head low, and applying burnt and smouldering rag under the nostrils, whilst I at the same time induced and kept up artificial respiration, by alternately compressing the thorax, and relaxing the pressure on the ribs. The heart was auscultated, but it had ceased to beat: and all attempts to restore animation were unavailing.

Upon more calmly questioning the spectators of the last moments of this sudden calamity, the following facts were elicited. He had complained of being worse and in more agonising pain, and of having more difficulty in breathing.